

Original Research Article

Efficacy of Training Module on Knowledge of Diabetes Care among Nurses

Sheela Upendra¹, Seeta Devi²

¹Associate Professor, ²Assistant Professor,
Symbiosis College of Nursing, Symbiosis International University, Pune.

Corresponding Author: Sheela Upendra

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ABSTRACT

India is the diabetes capital of the world with a projected 109 million individuals with diabetes by 2035. Focus of the study was on training module for diabetes care for nurses and to develop skills in Nurses who are directly involved in patient care, to develop the capacity to improve diabetes care with objective to assess the level of knowledge among Nurses on diabetes care and to evaluate the effectiveness of training module on knowledge of diabetes care among nurses. One group pre and post-test design, pre experimental research design was used. Setting of the study was corporate hospital and municipal hospitals of Pune city. Samples were Nurses of corporate and private hospitals. Sample size was 200 nurses. Probability sampling technique was used. A self-administered structured knowledge questionnaire on five domains of diabetes care used and an opinion scale on efficacy of training module on diabetes care. This training module was in the form of skill stations. Before giving the training module on diabetes care average pre-test knowledge score was 21 which increased to 34.6 in post test. T-value for this comparison was 25.6 with 199 degrees of freedom. Corresponding p-value was small < 0.05. Training module on diabetes care for nurses was proved to be significantly effective in improving the knowledge of nurses regarding diabetes care.

Key words: efficacy; training module; diabetes care; nurses.

INTRODUCTION

In India with more than 62 million diabetic individuals currently diagnosed with the disease. [1] WHO defines diabetes as “a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces”. Diabetes is a chronic disease that occurs when the body cannot produce enough insulin or cannot use insulin effectively. [2] Diabetes mellitus occurs throughout the world, but is more common type 2 in the more developed countries. The greatest increase in prevalence is, however, expected to occur in Asia and Africa, where most patients will probably be found by 2030. [3]

India is the diabetes capital of the world with a projected 109 million individuals with diabetes by 2035. [4] An estimate shows that nearly 1 million Indians die due to Diabetes every year. The average age on onset is 42.5 years. [5] Additionally, a study by the American Diabetes Association reports that India will see the greatest increase in people diagnosed with diabetes by 2030. [6]

Genetic factors are among the greatest contributors to the rapid spread of this disease. Cultural and social factors are no less important. The use of nurses as case managers for patients with poor glycemic control follows the Chronic Care Model (CCM) of collaborative care in that a

proactive approach is undertaken by the health care team to improve outcomes. [7]

A study conducted by Janice A Drass, on Perceived and Actual Level of Knowledge of Diabetes Mellitus Among Nurses and found a moderately low negative correlation ($r = -.36, P < .001$) indicated that the staff nurses' perceived knowledge of diabetes mellitus was inversely related to actual knowledge. Subjects were found to have a mean score of 64% on the DBKT. [8] Effective management of diabetes requires a partnership between the person with diabetes and health professionals. People with diabetes have an increased risk of developing a number of serious health problems poorly managed diabetes leads to serious complications and early death [9]

Diabetes education is the cornerstone of diabetes management. [10] Educating Nurses turns educates the Diabetes patient and can promote Diabetes self-management education

Diabetes self-management education and on-going support are an essential part of diabetes care. Self-management education enables people with diabetes to manage their disease, improve health outcomes, and to become the pivotal figure in the management of their healthcare. [11] Present study was focus on training module on diabetes care for nurses. Thus the main focus of the training module was to develop skills in Nurses who are directly involved in patient care, to develop the capacity to improve diabetes care.

Statement of problem: "Efficacy of Training Module on Knowledge of Diabetes Care among Nurses of select Hospitals in Pune city"

Objectives

- To assess the level of knowledge among Nurses on diabetes care.
- To evaluate the efficacy of training module on knowledge of diabetes care among nurses

MATERIALS AND METHODS

The study was aimed for training module on knowledge of diabetes care and

determines its effectiveness; hence an evaluative research approach was used. One group pre and post-test design, pre experimental research design was used. Training module was independent variable and knowledge of Nurses on diabetes care was dependent Variable. Setting of the study was corporate hospital and municipal hospitals of Pune city. Samples were Nurses of corporate and private hospitals .Sample size was 200 nurses. Probability sampling technique was used. A self administered structured knowledge questionnaire on five domains of diabetes care used and an opinion scale on efficacy of training module on diabetes care. This training module was in the form of skill stations. Training module covered the various areas like Meaning of diabetes, Diabetes diagnostic tests, Oral hypoglycemic agents, Insulin Injection and diabetes foot care. Pre test was administered to the Nurses after obtaining willingness from the participant. Training Module on diabetes care given. Post-test and opinion on effectiveness of training module was conducted after training session.

RESULTS

Section I: Description of demographic variables in terms of frequency and percentage N=200

Table 1: Description of samples in terms of frequency and percentage

Demographic variable	Frequency	Percentage
Age		
21- 25 years	47	23.5%
26- 30 years	14	7.0%
31-35 years	18	9.0%
More 35 years	121	60.5%
Gender		
Female	190	95.0%
Male	10	5.0%
Professional qualifications		
B.Sc. N	34	17.0%
G.N. M	158	79.0%
M.Sc. N	8	4.0%
Years of experience		
Less than 2 years	46	23.0%
2.1 - 5 years	23	11.5%
5.1 - 10 years	13	6.5%
More than 10 years	118	59.0%
Training on diabetes		
No	160	80.0%
Yes	40	20.0%

Section II: Analysis of data related to existing level of knowledge of Preschool teachers on diabetes care N=200

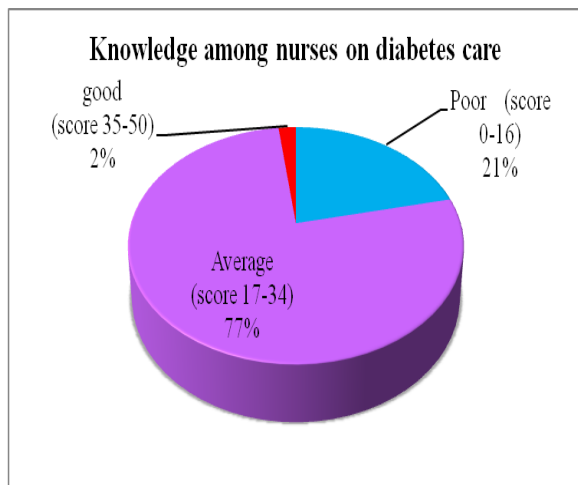


Fig 1: Knowledge among nurses on diabetes care

In pre-test, majority of 76.5% of the nurses had average knowledge (score 17-34), 21.5% of them had poor knowledge (score 0-16) and 2% of them had good knowledge regarding diabetes care.

Section III: Analysis of data related to effectiveness of training module on knowledge of diabetes care among nurses

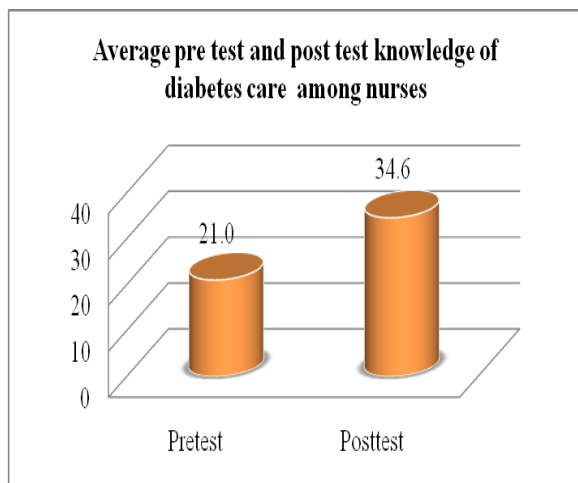


Fig 2: Average pre test and post test knowledge of diabetes care among nurses

Applied paired t-test for comparison of pre-test and post test knowledge scores of nurses. Average pre-test knowledge score was 21 which increased to 34.6 in post test. T-value for this comparison was 25.6 with 199 degrees of freedom. Corresponding p-value was small < 0.05, null hypothesis is

rejected. Training module on diabetes care was proved to be significantly effective in improving the knowledge of nurses regarding diabetes care.

Section IV: Analysis of data related to the opinion on training module on diabetes care from nurses

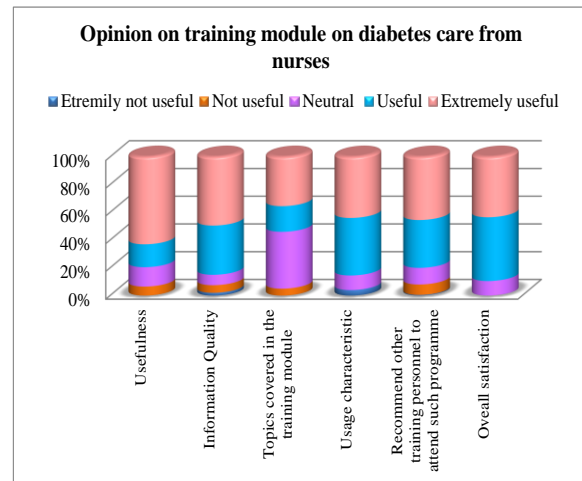


Fig 3: Opinion on training module on diabetes care from nurses

DISCUSSION

The findings of the present study revealed that there Average pre-test knowledge score was 21 which increased to 34.6 in post test. T-value for this comparison was 25.6 with 199 degrees of freedom. Corresponding p-value was small < 0.05, null hypothesis is rejected. Training module is proved to be significantly effective in improving the knowledge of nurses regarding diabetes care.

Similar findings are found in study of Upendra Sheela [12] where average knowledge score of student nurses in the pre-test was changed to good knowledge score in the post test after the workshop on diabetes. Average knowledge score of students nurses in pre-test was 15.5 which increased to 34.3 in post test. T-value for this comparison was 41.9 at 99 degrees of freedom. Corresponding p-value was 0.000 which is small < 0.05. The workshop has improved the knowledge on diabetes care of the nursing students.

Similar findings were seen in KaurSukhpals [13] study where the mean knowledge score of the nurses before

starting the workshop was 21.9 ± 3.37 and it improved to 35.5 ± 3.78 at the end of the workshop.

CONCLUSION

Before giving the training module on diabetes care average pre-test knowledge score was 21 which increased to 34.6 in post test. T-value for this comparison was 25.6 with 199 degrees of freedom. Corresponding p-value was small < 0.05 . Training module on diabetes care for nurses was proved to be significantly effective in improving the knowledge of nurses regarding diabetes care

Conflict of interest - Nil

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